

**CLAIMS**

1. A method for generating a UWB signal comprising the step of differentiating a clock signal once to obtain the UWB signal.
- 5 2. A method according to claim 1 further comprising the step of differentiating the UWB signal at least once to generate a monocyclical or a polycyclical UWB signal.
- 10 3. A method according to claim 1 further comprising the step of modulating a data signal with the UWB signal to obtain a modulated UWB signal.
4. A method according to claim 3 further comprising the step of differentiating the modulated UWB signal at least once to generate a monocyclical or a  
15 polycyclical UWB signal.
5. The method of claim 3 wherein the modulated pulse is amplitude-modulated.
6. The method of claim 3 wherein the modulated pulse is pulse-position-  
20 modulated.
7. A system comprising:
  - an amplifier having an input and an output;
  - negative feedback means;

a low-pass filtering means;

a DC decoupling means

the amplifier providing an output of the system to the low-pass filtering means to produce a low-pass filtered output;

5 the negative feedback means feeding back the low-pass filtered output of the amplifier is negatively feedback to the input means of the amplifier;

the DC decoupling means removing DC components from the amplifier output; wherein

the output of the system is an amplified differential of an input signal to  
10 the system; and

whereby

a UWB pulse is produced for transmission.

8. A system as claimed in claim 7 wherein the amplifier means comprises of a  
15 biased transistor.

9. A system as claimed in claims 7 or 8 wherein the input signal is a clock signal.

20 10. A system as claimed in claims 7 or 8 wherein the input signal is a saw tooth signal.

11. A system as claimed in claims 7 or 8 wherein the input signal is a pulse signal.

12. A system as claimed in claims 7 or 8 wherein the system is implemented in an Integrated Circuit.

5 13. A system as claimed in claims 7 to 12 wherein the system comprises current-voltage topology.

14. A system as claimed in claims 7 to 12 wherein the system comprises voltage-voltage topology.

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15. A system as claimed in claims 7 to 12 wherein the system comprises voltage-current topology.

16. A system as claimed in claims 7 to 12 wherein the system comprises  
15 current-current topology.